

What is claimed:

- 1 An airborne imaging system comprising:
 - a blister housing disposed on a host vehicle; said blister housing having a leading end, a trailing end and a payload area, the leading end aligned with a leading end of the host vehicle;
 - an air inlet defined by the leading end of said blister housing;
 - an air channel connecting the air inlet to a power unit disposed within the blister housing;
 - a command/control system disposed within the payload area operably powered by the power unit; and
 - a payload ejection system operably coupled to the command center for releasing an assessment system from the payload area; said assessment system including an imaging system, a transmitter and a parachute.
2. The airborne imaging system of claim 1 wherein the host vehicle is a gravity bomb, a remotely piloted vehicle, or a missile.
- 3 The airborne imaging system of claim 1 wherein the blister housing includes a mating face and an external face, said mating face covered by a pressure mounted adhesive layer for adhering to an external surface of the host vehicle.
4. The airborne imaging system of claim 3 wherein the blister housing includes an aerodynamic tape layer partially disposed on the external face, said aerodynamic tape layer having a distal end that overhangs the circumference of the blister housing for adhering to the host vehicle.

5. The airborne imaging system of claim 1 wherein the blister housing includes an external interface connector for communication with the command /control system before deployment.
6. The airborne imaging system of claim 1 wherein the assessment system is eccentrically weighted so as to produce pendular motion while suspended from a parachute.
7. The airborne imaging system of claim 1 wherein the assessment system includes an optical imaging device.
8. The airborne imaging system of claim 8 wherein the optical imaging device contains an adjustable lens and an adjustable lens mount, said adjustable lens mount fixed before deployment to a set oblique look down angle so as to increase a video-imaging footprint.
9. The airborne imaging system of claim 1 wherein the parachute is a ring vortex or conical parachute
10. The airborne imaging system of claim 1 wherein the transmitting system includes an antenna.
11. The airborne imaging system of claim 10 wherein the antenna is a plurality of conductors enclosed within the ring vortex or conical parachute.

12. The airborne imaging system of claim 10 wherein the antenna is a single conductor that trails the assessment system.

13. The airborne imaging system of claim 1 wherein the parachute is a parafoil design parachute.

14. A method for providing a wide angle continuously updated video mosaic of an area of interest by an airborne imaging system delivered by an airborne platform, said method comprising:

- attaching a blister housing to a host vehicle, said blister housing including a sensor system;

- streamlining a perimeter interface of the host vehicle and blister housing by applying a layer of aerodynamic tape;

- programming a mission profile into the sensor system;

- connecting a lanyard from the blister housing to the airborne platform;

- directing the host vehicle toward an area for assessment;

- detaching the lanyard;

- activating a command/control center internal to the blister housing for calculating an optimal deployment schedule;

- deploying a sensor system from the blister housing;

- decelerating the sensor system by a drag device;

- deploying a paradevice from the sensor system;

recording a plurality of individual video frames of an expanded footprint by a video-imaging device onboard the sensor system; and

transmitting the plurality of individual video frames to a processing system that continuously constructs an updated image mosaic of the area of interest.

15. The method of claim 14 wherein the airborne platform is a plane or an unmanned airborne vehicle

16. The method of claim 14 wherein the blister housing is autonomously powered by an impeller driven generator

17. The method of claim 16 wherein the impeller driven generator is aerodynamically coupled to an air inlet on a leading edge of the blister housing.

18. The method of claim 17 wherein the air inlet is further aerodynamically coupled to a pressurization system so as to create an overpressure internal to the blister housing.

19. The method of claim 14 wherein the blister housing is autonomously powered by an internal battery.

20. The method of claim 14 wherein deploying the sensor system includes the release of a blister housing cover.

21. The method of claim 14 wherein the sensor system is eccentrically weighted so as to create pendular motion.

22. The method of claim 21 wherein the video-imaging device includes a lens system with an adjustable camera look down angle.

23. The method of claim 22 wherein a range for the adjustable camera look down angle is twenty degrees to sixty degrees.

24. The method of claim 14 wherein the paradevice is a ring vortex or a conical parachute so as to create an angular motion of the sensor system.

25. The method of claim 24 wherein transmitting the plurality of individual video frames is through an antenna system contained within the ring vortex or the conical parachute.

26. The method of claim 14 wherein the sensor system is suspended from a parafoil, said parafoil having active control surfaces for extending a loiter time at the area of interest.

27. An airborne imaging system remotely connected to a laptop receiving station comprising:
a blister package including:

a blister housing operably connected to a host vehicle;

a command/control section positioned within said blister housing to sense a desired orientation of said blister housing;

a power system operably connected to the command /control system; and
an assessment sensor system, selectively deployed from the blister package upon
achieving the desired orientation, said assessment sensor system including;
an eccentrically weighted imaging payload;
a paradevice to suspend and rotate the eccentrically weighted imaging payload;
and
a transmitter system that communicates a sensor output with the laptop receiving
station.